

WHAT IS CLAIMED IS:

1. An image pickup apparatus comprising:

a plurality of image pickup areas formed on a same semiconductor chip and arranged in the horizontal and the vertical directions, each image pickup area having a plurality of pixels arranged in the horizontal and the vertical directions;

a plurality of vertical scanning circuits adapted to sequentially scan pixels in the vertical direction to for scan a plurality of image pickup areas in the vertical direction independently from each other;

a plurality of lenses, at least one of which is provided in each of said plurality of image pickup areas, adapted to focus light to form an image on said image pickup areas; and

a driving circuit adapted to drive said plurality of vertical scanning circuits so that at least a part of a scanning period of each of said plurality of vertical scanning circuits overlaps with each other.

2. An image pickup apparatus according to claim 1, further comprising:

a common output line for sequentially outputting signals from said plurality of image pickup areas that are arranged in the horizontal and the vertical directions and a horizontal scanning circuit provided in common for the plurality of image pickup areas in

the vertical direction, adapted to read out signals to said common output lines.

3. An image pickup apparatus according to claim

5 2,

wherein said driving circuit drives said plurality of scanning circuits so that said plurality of scanning circuits scan one line of pixels included in a first image pickup area that is one of the plurality of image pickup areas arranged in the vertical direction, and then scan one line of pixels included in a second image pickup area that is one of the plurality of image pickup areas arranged in the vertical direction, without scanning a plurality of lines, which are not scanned yet, included in said first image pickup area.

4. An image pickup apparatus according to claim 1, further comprising:

a first common output line for sequentially outputting signals from a first image pickup block including a plurality of image pickup areas that are arranged in the horizontal direction, a first horizontal scanning circuit adapted to read out signals to said first common output line, a second common output line for sequentially outputting signals from a second image pickup block including a plurality of image pickup areas that are arranged in the horizontal

direction, and a second horizontal scanning circuit adapted to read out signals to said second common output line, and wherein said first image pickup block and said second image pickup block are arranged in the
5 vertical direction.

5. An image pickup apparatus according to claim
4,

10 wherein said driving circuit drives said plurality of vertical scanning circuits so that said plurality of vertical scanning circuits scan one line of pixels included in said first image pickup block and one line of pixels included in said second image pickup block at
a same timing.

15 6. An image pickup apparatus according to claim
1,

wherein said plurality of vertical scanning circuit is provided adjacent to at least one side of
20 each of said plurality of image pickup areas.

7. An image pickup apparatus comprising:

a plurality of image pickup areas formed on a same semiconductor chip and arranged in the horizontal and
25 the vertical directions, each image pickup area having a plurality of pixels arranged in the horizontal and the vertical directions and a distance between adjacent

image pickup areas being larger than a distance between pixels in a same image pickup area;

5 a plurality of vertical scanning circuits adapted to sequentially scan pixels in the vertical direction to scan plurality of image pickup areas in the vertical direction independently from each other;

10 a common output line for sequentially outputting signals from said plurality of image pickup areas that are arranged in the horizontal and the vertical directions; and

15 a horizontal scanning circuit provided in common for the plurality of image pickup areas in the vertical direction, adapted to read out signals to said common output lines.

8. An image pickup apparatus according to claim 7,

20 wherein said driving circuit drives said plurality of scanning circuits so that said plurality of scanning circuits scan one line of pixels included in a first image pickup area that is one of the plurality of image pickup areas arranged in the vertical direction and then scan one line of pixels included in a second image pickup area that is one of the plurality of image pickup areas arranged in the vertical direction without
25 scanning a plurality of lines, which are not scanned yet, included in said first image pickup area.

9. An image pickup apparatus according to claim
7,

wherein said plurality of vertical scanning
circuit is provided adjacent to at least one side of
5 each of said plurality of image pickup areas.

10. An image pickup apparatus comprising:

a plurality of image pickup areas formed on a same
semiconductor chip and arranged in the horizontal and
10 the vertical directions, each image pickup area having
a plurality of pixels arranged in the horizontal and
the vertical directions;

a plurality of vertical scanning circuits adapted
to sequentially scan pixels in the vertical direction
15 to scan a plurality of image pickup areas in the
vertical direction independently from each other; and

wherein said plurality of vertical scanning
circuits are provided adjacent to at least one side of
each of said plurality of image pickup areas.